

IN THE DRAWINGS

Please replace the drawing sheet for Figure 10 with the replacement drawing sheet attached to the Submission of Corrected Drawings submitted herewith.

REMARKS

Claims 1-22 are pending in the application. Claims 4-22 are withdrawn from consideration as being directed to a non-elected invention. In the non-final Office Action dated July 31, 2006, the Examiner made the following disposition:

- A.) Objected to the title of the invention.
 - B.) Objected to the abstract of the disclosure.
 - C.) Objected to the drawings.
 - D.) Rejected claims 1-3 under 35 U.S.C. 112, second paragraph.
 - E.) Rejected claims 1-3 under 35 U.S.C. 102(b) as allegedly being anticipated by *Rokita, et al. (U.S. 5,812,352)* ("Rokita").
 - F.) Rejected claims 1-3 on the ground of nonstatutory obviousness-type double patenting.
- Applicants respectfully traverse the rejections and address the Examiner's disposition below.

A.) Objection to the title of the invention:

The title of the invention has been amended as per the Examiner's request to overcome the objection.

Applicants respectfully submit the objection has been overcome and request that it be withdrawn.

B.) Objection to the abstract of the disclosure:

The abstract of the disclosure has been amended as per the Examiner's request to overcome the objection.

Applicants respectfully submit the objection has been overcome and request that it be withdrawn.

C.) Objection to the drawings:

Applicants respectfully disagree with the objection.

The Examiner argues that the drawings should show a hand held transmitter with a single enclosure that plugs into a receptacle. The specification clearly describes, with reference to Figure 10, the claimed hand-held transmitter with a single enclosure that plugs into a receptacle:

In an embodiment, the transmitter can further provide for testing an arc fault circuit interrupter (AFCI). This transmitter test can be included into a transmitter alone or combined with the other transmitter tests described above. That is, the transmitter can perform one or more of the following tests: AFCI testing, GFCI testing, circuit breaker identification, and receptacle wire testing. Figure 10 depicts a schematic diagram of an illustrative transmitter 1000 consistent with the present invention that performs all four of the tests. One having skill in the art will appreciate that the circuit depicted in Figure 10 can be adapted when less than all four tests are implemented in the transmitter.

Transmitter 1000 is preferably a single compact unit having a plastic enclosure. Transmitter 1000 has three prongs P3, P1, and P2 designed to be respectively inserted into the hot, neutral and ground contacts of a 120 VAC receptacle. The transmitter also has three lamps LD1A, LD2A, and LD3A, such as LEDs, which indicate status, and two user-actuatable switches SW1A and SW2A. Switch SW2A effects GFCI testing and switch SW1A effects AFCI testing. The transmitter's circuitry is sealed within the plastic enclosure.

(Specification, page 17, line 26-page 18, line 7)(emphasis added).

Thus, the specification clearly describes to one having ordinary skill in the art the claimed hand-held transmitter with a single enclosure that plugs into a receptacle. Figure 10 shows leads that plug into a receptacle, but does not show the enclosure "body." Figures 2, 4, and 5 each show a block diagram of an enclosure with leads that can plug into a receptacle. The specification text recited above clearly describes that the embodiment of Figure 10 "is sealed within the plastic enclosure." (Specification, page 18, lines 6-7).

Figure 10 has been amended to include transmitter label "1000", which is described in the specification with reference to Figure 10, but previously not included in Figure 10. No new matter is added by the amendments made herein.

Applicants respectfully submit the objection has been overcome and request that it be withdrawn.

D.) Rejection of claims 1-3 under 35 U.S.C. 112, second paragraph:

Applicants respectfully disagree with the rejection. However, to expedite prosecution, claims 1 and 2 have been amended to clarify the claim language.

Specifically, to address the Examiner's individual points, the Examiner questions how the transmitter creates a pulse. The claimed transmitter includes a circuit that creates a pulse.

The Examiner questions how the transmitter trips the interrupter. The claimed pulse trips the arc fault circuit interrupter.

The Examiner questions how the transmitter determines whether the receptacle is wired properly and how the transmitter knows the circuit is wired properly. The claimed transmitter has a second circuit that tests whether the receptacle is wired properly by indicating whether at least one of a hot wire, a neutral wire, and ground wire of the branch circuit is wired properly based on current flow through at least one of the hot wire, neutral wire, and ground wire.

The Examiner questions the structural relationship among the elements. The claimed transmitter includes a first and a second circuit.

The Examiner states that "the detail circuit of the transmitter is unclear." *Office Action of 7/31/06*, page 4. Applicants do not understand this contention. Is the Examiner referring to the illustrative embodiment in Figure 10, which is clearly described in the specification? The claims clearly recite a transmitter that includes: a circuit that tests an arc fault circuit interrupter by creating a pulse on a branch circuit, and a second circuit that tests whether a receptacle is wired properly by indicating whether at least one of a hot wire, a neutral wire, and ground wire of the branch circuit is wired properly based on current flow through at least one of the hot wire, neutral wire, and ground wire.

The Examiner argues that "anyone can short circuit the receptacle ... and determine if interrupter is tripped or not and thus determine if it is wired properly." *Office Action of 7/31/06*, page 4. Applicants disagree. It appears that the Examiner has failed to recognize that the claimed transmitter tests an arc fault circuit interrupter. As described in Applicants' specification, arc fault circuit interrupters and ground fault circuit breakers are different because they are tripped by different types of signals. (Specification, page 2, lines 3-26). Unlike arc fault circuit interrupters, ground fault circuit breakers are typically not tripped by arc faults. The claimed transmitter creates a particular pulse that trips an arc fault circuit interrupter.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

E.) Rejection of claims 1-3 under 35 U.S.C. 102(b) as allegedly being anticipated by *Rokita, et al. (U.S. 5,812,352)* (“*Rokita*”):

Applicants respectfully disagree with the rejection.

Independent claim 1 claims a hand-held transmitter having a circuit that tests an arc fault circuit interrupter by creating a pulse on the branch circuit that trips the arc fault circuit interrupter.

This is clearly unlike *Rokita*, which fails to disclose or suggest a transmitter circuit that trips an arc fault circuit interrupter. In fact, *Rokita* fails to even mention arc fault circuit interrupters. Instead, *Rokita* discloses a circuit breaker tester for testing ground fault circuit breakers. *Rokita* 1:36-48. As described in Applicants’ specification, arc fault circuit interrupters and ground fault circuit breakers are different because they are tripped by different types of signals. (Specification, page 2, lines 3-26). Unlike arc fault circuit interrupters, ground fault circuit breakers are typically not tripped by arc faults. Therefore, to test an arc fault circuit interrupter, a tester must produce signal that is different than the type of signal that is used to test a ground fault circuit interrupter. *Rokita*’s tester does not produce this type of signal. Instead, *Rokita* produces a signal that is like a ground fault.

For at least this reason, *Rokita* fails to disclose or suggest claim 1.

Claims 2 and 3 depend directly or indirectly from claim 1 and are therefore allowable for at least the same reasons that claim 1 is allowable.

Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

F.) Rejection of claims 1-3 on the ground of nonstatutory obviousness-type double patenting:

Applicants respectfully disagree with the rejection.

The Examiner argues that the subject matter of the claimed invention is not patentably distinct from claims 3 and 8 of U.S. 6,166,532 and claims 14, 36, 41, 43, and 47 of U.S. 6,844,712. Applicants disagree. The claims of U.S. 6,166,532 and U.S. 6,844,712 do not recite a transmitter having a circuit that tests an arc fault circuit interrupter electrically coupled to the selected branch circuit by creating a pulse on the branch circuit that trips the arc fault circuit interrupter.

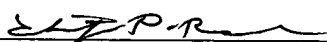
Applicants respectfully submit the rejection has been overcome and request that it be withdrawn.

CONCLUSION

In view of the foregoing, it is submitted that claims 1-3 are patentable. It is therefore submitted that the application is in condition for allowance. Notice to that effect is respectfully requested.

Respectfully submitted,

Dated: January 31, 2007

By:  Reg. 45,034

Christopher P. Rauch

SONNENSCHNEIDER, NATH & ROSENTHAL LLP

P.O. Box #061080

Wacker Drive Station - Sears Tower

Chicago, IL 60606-1080

Telephone 312/876-2606

Customer #26263

Attorneys for Applicant(s)